

MIOSHA

Michigan Occupational Safety and Health Administration (MIOSHA)
Department of Labor and Economic Opportunity (LEO)

AGENCY INSTRUCTION

DOCUMENT IDENTIFIER:

MIOSHA-COM-22-2

DATE:

December 5, 2022

SUBJECT: Oil and Gas Drilling and Servicing Operations - State Emphasis Program (SEP)

- I. Purpose. This instruction establishes a state emphasis program (SEP) to reduce employee exposures to safety and health hazards during oil and gas drilling and servicing operations including hazards that can lead to fatalities.
- II. Scope. This instruction applies to the Consultation Education and Training Division (CETD), and the General Industry Safety and Health Division (GISHD).
- III. References.
 - A. Agency Instruction, MIOSHA-COM-05-2, [Abatement Assurance and Follow-up Inspection Procedures](#), as amended.
 - B. Agency Instruction, MIOSHA-COM-13-1, [Dual, One-MIOSHA, Intra-office Assistance, and Transfer of Inspections/Investigations](#), as amended.
 - C. Agency Instruction, MIOSHA-COM-15-2, [Horizontal or Vertical Standards – Determining Application](#), as amended.
 - D. Agency Instruction, MIOSHA-COM-20-1, [Companion and Expanded Inspections](#), as amended.
 - E. Executive Office of the President, Office of Management and Budget, [North American Industry Classification System \(NAICS\) Manual](#), as amended.
 - F. General Industry and Construction Safety and Health Standard Part 451. /R325.60051 et seq., [Respiratory Protection](#).
 - G. General Industry Safety and Health Standard Part 2. /R408.10201 et seq., [Walking-Working Surfaces](#).
 - H. General Industry Safety and Health Standard Part 33. /R408.13301 et seq., [Personal Protective Equipment](#).
 - I. General Industry Safety and Health Standard Part 57. /R408.15701 et seq., [Oil and Gas Drilling and Servicing Operations](#).
 - J. General Industry Safety and Health Standard Part 301. /R325.51101 et seq., [Air Contaminants for General Industry](#).
 - K. General Industry Safety Standards Part 8. /R408.10801 et seq., [Portable Fire Extinguishers](#).
 - L. General Industry Safety Standards Part 13. /R408.11301 et seq., [Derricks](#).
 - M. General Industry Safety Standards Part 92. /R408.19201 et seq., [Hazard Communication](#).

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- N. Michigan Department of Environment, Great Lakes, and Energy, webpage, [Hydrogen Sulfide \(H2S\) - Q&A](#), accessed October 12, 2022.
- O. MIOSHA [Field Operations Manual \(FOM\)](#), as amended.
- P. MIOSHA Safety and Health Standard Part 11. /R408.22101 et seq., [Recording and Reporting of Occupational Injuries and Illnesses](#).
- Q. National Institute for Occupational Safety and Health (NIOSH), webpage, [Oil and Gas Extraction Program](#).
- R. NIOSH, [Oil and Gas Workers: How to Prevent Fatigued Driving Work](#), March 2018.
- S. NIOSH-OSHA Hazard Alert, [Health and Safety Risks for Workers Involved in Manual Tank Gauging and Sampling at Oil and Gas Extraction Sites](#), February 2016.
- T. NIOSH-OSHA Hazard Alert, [Worker Exposure to Silica during Hydraulic Fracturing](#), June 2012.
- U. OSHA and National STEPS Network and NIOSH Alliance, [Hot Work in Oilfields](#), September 2016.
- V. OSHA and National STEPS Network and NIOSH Alliance, [Prevention of Fatalities from Ignition of Vapors by Mobile Engines and Auxiliary Motors](#), June 2017.
- W. US Bureau of Labor Statistics (BLS), 2019 Census of Fatal Occupational Injuries (CFOI), [Table A-1. Fatal occupational injuries by industry and event or exposure, all United States, 2019](#).
- X. US Bureau of Labor Statistics (BLS), 2020 Census of Fatal Occupational Injuries (CFOI), [Table A-1. Fatal occupational injuries by industry and event or exposure, all United States, 2020](#).
- Y. US Bureau of Labor Statistics, Occupational Employment and Wage Statistics, table, [Sectors 21, 22, & 23: Mining, Utilities, and Construction](#), May 2021.
- Z. US Centers for Disease Control and Prevention (CDC), webpage, [Fatalities in Oil & Gas Extraction – FOG Data](#), page last reviewed: April 8, 2020.
- AA. US Occupational Health and Safety Administration (OSHA), webpage, [Oil and Gas Extraction](#).
- IV. Distribution. MIOSHA Staff; Federal OSHA; S-drive Accessible; MIOSHA Messenger; and Internet Accessible.
- V. Next Review Date. This instruction will be reviewed one year from date of issuance.
- VI. Contact. [Tarah Kile](#), CETD Director; and [Adrian Rocskay](#), GISHD Director.
- VII. Originator. Barton G. Pickelman, Director

- VIII. Background. MIOSHA has established this SEP to reduce employee exposures to safety and health hazards during oil and gas drilling, production, and servicing operations, especially those hazards that can lead to worker deaths. Nationally during 2019-2020, 155 fatalities occurred in the extraction industries (BLS, [2019](#) and [2020](#); NAICS 211, 213111, and 213112). In Michigan, there was a fatality in 2019 and again in 2021. These two deaths translate to a very high fatality rate for the oil and gas extraction industry in Michigan as it has relatively few employees; in May 2021 [BLS](#) counted only 750 workers in the state.

According to a [CDC database](#) (2015–2017), the causes of the fatalities in the industry nationally were, in decreasing order of prevalence, vehicle incidents, contact injuries (struck by, caught between or crushed), fires and explosions, falls from a height, and exposure to harmful substances (hydrogen sulfide, hydrocarbons, and carbon monoxide). The two recent fatalities in Michigan were caused by a flash fire and the employee crushed between a service truck and well head.

Various operations and activities in this industry have been identified as risk factors for fatal incidents. Fatigued (drowsy) driving is a major cause of crashes in this industry, and crashes are the leading cause of death for oil and gas extraction workers ([NIOSH](#), 2018). Fires and explosions have been started by hot work ([OSHA and National STEPS Network and NIOSH Alliance](#), 2016) and ignition of vapors by mobile engines and auxiliary motors ([OSHA and National STEPS Network and NIOSH Alliance](#), 2017).

Air contaminants pose a separate health hazard. Fracking operations can produce silica exposures over the permissible exposure limit; exposures occur during sand moving, sand transfer, and hot loading ([NIOSH-OSHA](#), 2012). Sour well sites have high levels of hydrogen sulfide. Of the 10,652 producible oil wells in Michigan, 1,360 wells had hydrogen sulfide levels exceeding 300 ppm ([EGLE](#), 2022), where 100 ppm is the level immediately dangerous to life or health (IDLH) and 15 ppm is the 15-minute, short-term exposure limit in Part 301, [Air Contaminants for General Industry](#). Workers involved in manual gauging and sampling of tanks containing process fluids can be exposed to levels of hydrocarbons that are IDLH ([NIOSH-OSHA](#), 2016). By targeting inspection activity in this industry, MIOSHA hopes to reduce or eliminate exposures to these hazards.

IX. Enforcement Activities

- A. All inspections under this SEP will be conducted by a team consisting of a safety officer (SO) and an industrial hygienist (IH).
- B. Number of Inspections. MIOSHA will examine at least five worksites and conduct at least 20 inspections under this SEP each fiscal year.
- C. Inspections will be part of the SEP and will be coded as such per section XII of this instruction if their scope involves determining the employer's compliance with General Industry Safety and Health Standard Part 57, [Oil and Gas Drilling and Servicing Operations](#). They would include:
 1. Programmed inspection assignments issued under this SEP.

2. Complaint inspections, referral inspections, and fatality inspections for any establishment with a NAICS code of 211120 (Crude Petroleum Extraction), 211130 (Natural Gas Extraction), 213111 (Drilling Oil and Gas Wells), and 213112 (Support Activities for Oil and Gas Operations).
 3. Follow-up inspections for any establishment with a NAICS code of 211120, 211130, 213111, and 213112.
- D. Targeting. A targeting list of employers and worksites will be established using publicly available databases and information from other government agencies. From the list, employers and sites will be selected at random for programmed inspection. Selection will attempt to include fracking operations and sour well sites.

Once an employer or site is selected, an inspection team consisting of an SO and an IH will be assigned to promptly conduct inspections. The SO and the IH will open separate, dual inspections in line with Agency Instruction, MIOSHA-COM-13-1, [Dual, One-MIOSHA, Intra-office Assistance, and Transfer of Inspections/Investigations](#). If a well site has multiple employers, as often is the case, the SO and IH will choose for inspection those employers with the highest probability of exposure to fatality hazards. For example, the SO and the IH will each choose two employers. These may or may not be the same employers depending on their exposure to safety versus health hazards.

The selection process described above will be repeated periodically during the fiscal year until at least five worksites have been inspected and until at least 20 inspections of oil and gas extraction operations have been conducted.

- E. Enforcement Delay. Since this is a new SEP, there will be a three-month enforcement delay on programmed inspections after the issuance date of the agency instruction to allow for initial outreach. The enforcement delay does not apply to unprogrammed activities, such as complaints, referrals, and fatalities.
- F. Scope of Inspection. The SO and IH shall evaluate the employer's compliance with Part 57, [Oil and Gas Drilling and Servicing Operations](#), on all programmed inspections assigned under this SEP and on all unprogrammed activities (complaints, referrals, fatalities) alleging hazards at such worksites. In addition, if an SO or IH discover potential hazards during an inspection not originally assigned to determine compliance with [Part 57](#), the SO/IH shall expand the investigation to address the hazards using the procedures in MIOSHA-COM-20-1, [Companion and Expanded Inspections](#). Per the MIOSHA [FOM](#), if the inspection scope is partial, the SO/IH must expand the scope to address any potentially serious hazard in plain view or discovered during the inspection process. The SO/IH will be observant for and understand the hazards associated with oil and gas industries with a NAICS code of 211120, 211130, 213111, and 213112.

The SO and IH will evaluate the employer's compliance with any other applicable standards. These can include Part 8, [Portable Fire Extinguishers](#); Part 13, [Derricks](#); Part 33, [Personal Protective Equipment](#); Part 451, [Respiratory](#)

[Protection](#); Part 11, [Recording and Reporting of Occupational Injuries and Illnesses](#); Part 301, [Air Contaminants for General Industry](#); Part 92, [Hazard Communication](#); and Part 2, [Walking-Working Surfaces](#). The SO/IH will ascertain whether any of the requirements of these standards are contained within [Part 57](#) and use the direction in Agency Instruction, MIOSHA-COM-15-2, [Horizontal or Vertical Standards – Determining Application](#), to cite the correct standard and rule.

- G. Employer Resources. Employers will be directed to the [NIOSH webpage](#) and [OSHA webpage](#) for oil and gas extraction. The webpages contain numerous links to research, hazard alerts, and training materials.

X. Follow-Up Inspections.

- A. If any violation has not been corrected within the time period specified on the citation, then a follow-up inspection shall be conducted in accordance with the MIOSHA [FOM](#) and Agency Instruction, MIOSHA-COM-05-2, [Abatement Assurance and Follow-up Inspection Procedures](#).
- B. Rule 1349 citations should be issued if there are only unabated other-than-serious citations, per Agency Instruction, MIOSHA-COM-05-2, [Abatement Assurance and Follow-up Inspection Procedures](#).
- C. For situations where follow-up inspections cannot be performed (for example, due to temporary, intermittent, or mobile operations), the enforcement division should when possible require the employer to provide written updates documenting the progress of abatement efforts.

- XI. Outreach. Upon issuance of this instruction, CET shall conduct outreach programs for this SEP. The outreach includes letters to establishments targeted for programmed inspections under the SEP advising them of their targeted status and offering CET consultation services; informing the public of the SEP through the MIOSHA eNews, MIOSHA News, and GovDelivery announcement; and resources for employers at the MIOSHA website. [Appendix A](#) is a copy of the outreach plan.

- XII. OSHA Information System (OIS) Coding. All enforcement inspections and compliance assistance interventions conducted under this SEP shall be coded in OIS as “OILGAS” under the State Emphasis Program field in the Inspection Data section.

APPENDIX A Outreach Plan

Name of Initiative: State Emphasis Program (SEP) on Oil and Gas Drilling and Servicing Operations

Initiative Liaison: Reo Rodriguez **Email:** Rodriguezr7@michigan.gov **Phone:** (517) 242-8082

Date Submitted: 10/24/2022

Check all that Apply: ☐ New/Revised Standard ☒ New Targeted Industry ☐ New Targeted Hazard

Divisions Involved:

Purpose/Scope:

This plan identifies MIOSHA activities that will be completed from effective date of the SEP to the expiration date to educate MIOSHA staff, as well as employers and employees in the State of Michigan, about the implementation of the SEP, to reduce lost workday and fatality rates in the oil and gas industry and to eliminate or reduce the exposure to health hazards during such operations. This outreach program will inform MIOSHA staff, employers, and employees of the SEP and will be conducted for three months prior to any SEP-related inspections.

1. Policy/Procedure

☒ New or revised MIOSHA policies, procedures, instructions, or interpretations.

MIOSHA Instruction MIOSHA-COM-22-2 Oil and Gas Drilling and Servicing Operations State Emphasis Program

2. Staff Training

☒ MIOSHA staff training. For example: a new/revised rule, measures to implement the rule, hazard(s) that initiated need for the rules, and/or MIOSHA policy or procedures affected by the rules.

All staff with enforcement or consultation responsibilities under the SEP will need training.

- CETD – outreach presentation will be added to CET Division meeting including information on inspection procedures.
- GISHD – inspection procedure presentation will be added to GISHD staff meeting including information on outreach.

3. Communication (Check all that apply.)

☐ Press Release – NOTE: MIOSHA does not typically issue a release for new SEPs.

☒ MIOSHA News – GISHD and/or CETD will author one or more article(s) during the SEP.

☒ MIOSHA eNews

☒ MIOSHA Website

☒ MIOSHA Messenger – When SEP is effective, announcement will be made to MIOSHA staff.

☒ GovDelivery Message – When SEP is effective, CETD will draft announcement to our subscribers.

☒ Social Media –

- When SEP is effective, CETD will post announcement to our subscribers.

☒ Other –

- Include information on no-cost on-site consultation services
- Employers will be directed to the NIOSH webpage and OSHA webpage for Oil and Gas Extraction.

4. Educational Resources (Check all that apply.)

- ☐ Promote existing DVDs in lending library and available for MIOSHA staff use.
- ☐ New reference materials for MIOSHA staff use.
- ☒ New or revised MIOSHA publications/fact sheets – Liaison to oversee generation of Fact Sheet for Oil and Gas Drilling Safety.
- ☐ New or revised MIOSHA presentations/training

5. Outreach Activities (Check all that apply.)

- ☐ Develop, revise, and conduct training program. Training and Consultation Core Committee to compose / generate training presentation for use by CET staff.
- ☒ Consultation. CET staff to discuss oil and gas drilling and servicing operations hazards with clients as appropriate.
- ☒ Alliances/partnerships with impacted public or private organizations.
 - Contact all alliance partners within the Oil and Gas Drilling and Servicing Operations industry
 - Target co-sponsors and MVPP companies or alliances (e.g., HBA, CAM, AGC, DTC, Walbridge, Holly, Marathon, DTE).
- ☒ Letters to target industries – Informing them of CET services, make them aware of the SEP.
- ☒ Targeted enforcement – As specified in SEP.
- ☐ No outreach activities needed.

6. Data Generated (Check all that apply.)

- ☐ Number of training seminars conducted.
- ☐ Number of employees trained.
- ☒ Number of consultation activities conducted.
- ☒ Number of compliance inspections conducted.

7. Workgroup

- ☐ Create a workgroup to implement outreach plan. Staff from CET, GISHD to be members.

Anticipated Launch Date: 11/15/2022 **Length of Initiative:** 1 year